

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

CONDITIONAL MAJOR (DRAFT PERMIT) No. F-05-003

TIN, INC., DBA TEMPLE-INLAND
1241 WEST 2ND STREET, MAYSVILLE KY

APRIL 27, 2005

MAY HONG, REVIEWER

SOURCE I.D. #: 021-161-00032

SOURCE A.I. #: 3008

ACTIVITY #: APE20040002

SOURCE DESCRIPTION:

TIN, Inc. dba Temple-Inland located at Maysville, Kentucky is a one hundred percent recycling mill. It produces recycled linerboard and corrugated medium from old corrugated container furnish via a twin-wire paper machine. For the purpose of permitting, the process has been divided into two areas, the Stock Preparation area and the Paper Machine area. In the stock preparation area, old corrugated container furnish is fed into pulpers and cleaned through a series of screens and cleaners. The pulp is then conditioned and treated before being fed to the paper machine area. The paper machine area consists of operations involving the feeding of the stock, the forming of the sheet, moisture removal and the winding of the sheet onto rolls. The other emission points listed are Temporary Package Boilers, Starch Storage Operations and Effluent Treatment Plants.

The individual component operations for the Stock Preparation area are listed as follow:

- Two pulper tanks (base and top)
- Polymer enclosed tank
- Top and base pulper dump and fine screen tanks
- Thermal dispersion unit and surge enclosed tanks
- Top and base presoak storage enclosed tanks
- Top and base deckers, enclosed chests and enclosed tanks
- Wax skim tank
- Coarse, fine, drum and bar screens
- Gyro and centrifugal cleaners
- Feed pumps and agitators
- Saveall thickener
- Clarifier
- Top and base refined stock enclosed chest
- Superclear, clear and white water enclosed chests
- Top and base machine, gyro enclosed chests
- Plastic and miscellaneous reject stream compactors

The individual component operations of the Paper Machine area are listed as follow:

- Base and top stuff boxes
- Approach flow cleaners
- Enclosed stock chests
- Enclosed base and top silos
- Chemical totes and enclosed tanks
- Condensate units and separators
- Wet end and dry end lube oil centers
- Top and base sheet headboxes
- Top and base fourdrinier wire and vacuum system
- Press sections
- Steam-heated drying section
- Calendar
- Winder
- Dry end pulper
- Press pit pulper

Temple-Inland has the potential to be a major source for volatile organic compound (VOC) emissions (100 tons per year (TPY)) and a major source for hazardous air pollutants (HAPs) with either 10 TPY of any single HAP or 25 TPY of combined HAPs. A federally enforceable state operating permit under 401 KAR 52:030 will limit the emissions of the source below the major source thresholds. This is a renewal of an expired conditional major permit under the name of Inland Paperboard and Packaging, Inc.

COMMENTS:

Type of control and efficiency:

Both the starch silo bin vent exhaust #1 and #2 uses a multi-cartridge cloth fabric filter system with automatic reverse air cleaning system with an efficiency of 90%.

Emission factors and their source:

Emission factors for the stock preparation and paper machine areas of the mill are taken from a set of reports published by the National Council for the Paper Industry for Air and Stream Improvement (NCASI) in 1997. These reports detail the actual results of sampling and testing done at the mill. Stock preparation area emission factors are from Table 5-6, NCASI Technical Bulletin No. 737 (July 1997) while paper machine area emission factors are from Tables 5-61 and 5-62, NCASI Technical Bulletin No. 740 (July 1997). Emission factors for the temporary package boilers were obtained from AP-42, Table 1.5-1 and vendor information. Mass balance was used to determine the emissions from the starch storage silos.

Applicable regulations:

401 KAR 63:020, *Potentially hazardous matter or toxic substances*, applies to both the Stock Preparation Area and the Paper Machine Area.

401 KAR 59:015, *New indirect heat exchangers*, applies to the temporary package boilers.

40 CFR 60 Subpart Dc, *Standards of performance for small industrial-commercial-institutional steam generating units*, applies to the temporary package boilers.

401 KAR 59:010, *New process operations*, applies to the starch silo operations.

401 KAR 63:010, *Fugitive emissions*, applies to the starch silo operations.

Comments:

1) Emission point number and description:

Emission unit 04, Effluent Treatment Plant: In the previous permit, the effluent treatment system was listed as a significant emission unit. However, no applicable requirements were called out in the permit for this activity, nor were any testing, monitoring, recordkeeping, and reporting requirements defined. In the renewal of this permit, the Division requested that the emissions from the treatment plant be quantified, or to list this emission unit as an insignificant activity. Temple-Inland responded with an explanation that methods for making reasonable estimates of emissions from pulp and paper industry wastewater treatment system do not exist. Temple-Inland requested to leave the effluent treatment system in the existing permit as a defined emission unit.

Emission unit 14 & 15, Temporary Package Boilers: Temple-Inland relies on Eastern Kentucky Power Cooperative (EKPC), an adjacent power plant, for its process steam. When maintenance outages at EKPC are scheduled, the mill must procure, set-up and use temporary package boilers to provide steam for heating and freeze protection. Paper production is halted during these periods, as the boilers would not provide enough steam to maintain normal operations. Up till now, there hasn't been a need to use the boilers. In preparation for potential EKPC outages, the propane-fired temporary package boilers are permitted for use for a maximum of 30 days, with a combined heat input capacity of 100 mmBtu/hr.

2) Regulations that are not applicable:

40 CFR 63 Subpart S, *National Emission Standard for Hazardous Air Pollutants from the Pulp and Paper Industry*, does not apply to the Stock Preparation and Paper Machine area. The regulation is limited to processes using secondary or non-wood fibers with a bleaching system. As Temple-Inland does not bleach to brighten the pulp processed, it meets the exemption laid out in this rule.

EMISSION AND OPERATING CAPS DESCRIPTION:

In order to keep VOC emissions to below 90 tons per year, the mill is limited to a production rate of 558,163 Machine Dried Tons/year.

Operation of both the temporary package boilers are limited to 30 days per year from the date of start up, and only to be used during periods of maintenance outages of Eastern Kentucky Power Cooperative.

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.